

REMARKS

Claims 1-8 are pending. Claims 1-4 have been amended. Claims 5-8 have been withdrawn from further consideration. Reconsideration and allowance of the present application based on the following remarks are respectfully requested.

In the Drawings

The drawings were objected to for failing to comply with 37 C.F.R. § 1.84(p)(5). Specifically, the drawings were objected to because references Ex, AM, IN, CO, IF, PM, PW, BP, P1, P2, M1, and M2 were shown in the drawings and not described in the specification. Applicants have amended the specification to include these references numerals. Applicants submit that no new matter is introduced by this amendment. Accordingly, Applicants respectfully request reconsideration and withdrawal of this objection.

Double Patenting

Claims 1-4 were rejected under the judicially created doctrine of obviousness-type double patenting over claims 1-6 of co-pending Application No. 09/988,830. Applicants will file a Terminal Disclaimer once the later of the two pending applications is in otherwise allowable condition.

Claim Rejections Under 35 U.S.C. § 103

A. Claims 1-3 were rejected under 35 U.S.C. § 103(a) over Hase et al. (U.S. Patent No. 6,252,648) in view of Somekh (U.S. Patent No. 6,394,109). Applicants respectfully traverse this rejection.

Claim 1 recites, in part, a lithographic projection apparatus which includes a gas supply to supply a purge gas which comprises molecular oxygen at a total partial pressure of from 1×10^{-4} Pa to 1 Pa.

Hase is directed to a cleaning system which uses an inert gas and a small amount of oxygen in a closed space to clean an organic compound from a lens by producing ozone. For example, Hase solves the problem of ammonium sulfate deposits (column 1, line 48), carbon deposits and other organic deposits (column 1, line 67) by using ozone to remove them. In contrast, Somekh discloses an apparatus for removing carbon from a charged particle beam lithography system. Somekh's charged particle system requires that imaging take place in an extremely low pressure environment as generally understood by one of ordinary skill in the

art of particle beam lithography systems. Thus, Somekh's cleaning system cannot be combined with Hase's relatively high-pressure inert gas purge system. Accordingly, there is no motivation to modify the system of Hase by using the carbon removing cleaning system of Somekh since it would render Hase's device less useful. The rejection is simply the result of impermissible picking and choosing of various elements, based solely on Applicant's disclosure as a blueprint. Accordingly, Applicant submits that the rejection is based on impermissible hindsight, not motivation from the references.

Further, even if Somekh was combined with Hase, the combination would not teach or suggest Applicants claimed invention. As indicated in the Office Action, Hase does not teach the total partial pressure between 1×10^{-4} Pa to 1 Pa. The Office Action relies on Somekh as teaching that the flow rate and pressure of oxygen are introduced at predetermined values (column 5, lines 39-45) and alleges that the partial pressure of oxygen recited in claim 1 would have been obvious to one of ordinary skill in the art. Applicants respectfully disagree.

Applicants submit that the partial pressure of oxygen being between 1×10^{-4} Pa to 1 Pa is not an obvious design choice. As described in detail in the specification of the present application (pages 9 and 10), if the partial pressure of oxygen is below 1×10^{-4} Pa, the amount of contaminant removal may be insufficient or the cleaning process may take too long and if the partial pressure of oxygen is above 1 Pa, there may be an unacceptable loss in transmission. Accordingly, in view of these considerations, the claimed range was found to be acceptable. Neither Hase or Somekh teach or suggest that these considerations should be taken into account when selecting a predetermined flow rate and pressure of oxygen. Accordingly, no combination of Hase and Somekh teach or suggest a lithographic projection apparatus which includes a gas supply to supply a purge gas which comprises molecular oxygen at a total partial pressure of from 1×10^{-4} Pa to 1 Pa, as recited in claim 1.

Claims 2 and 3 are believed allowable for at least the reasons presented above with respect to claim 1 by virtue of their dependence upon claim 1. Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejection of claims 1-3 under 35 U.S.C. § 103(a) over Hase in view of Somekh.

B. Claim 4 was rejected under 35 U.S.C. § 103(a) over Hase in view of Somekh and further in view of Akagawa et al. (U.S. Patent No. 6,288,769). Applicants respectfully traverse this rejection.

Claim 4 is believed allowable for at least the reasons presented above with respect to claim 1 by virtue of its dependence upon claim 1. Akagawa fails to overcome the deficiencies of Hase and Somekh noted above. Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejection of claim 4 under 35 U.S.C. § 103(a) over Hase in view of Somekh and further in view of Akagawa.

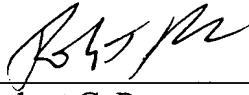
Conclusion

In view of the foregoing, the claims are believed to be in form for allowance, and such action is hereby solicited. If any point remains in issue which the Examiner feels may be best resolved through a personal or telephone interview, please contact the undersigned at the telephone number listed below.

All objections and rejections having been addressed, it is respectfully submitted that the present application is in a condition for allowance and a Notice to that effect is earnestly solicited.

Respectfully submitted,
PILLSBURY WINTHROP LLP

By: _____


Robert C. Perez
Reg. No.: 39,328
Tel. No.: (703) 905-2159
Fax No.: (703) 905-2500

RCP\VVK
1600 Tysons Boulevard
McLean, VA 22102
(703) 905-2000